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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to the powder cosmetics liquefied by inunction. If ointment is rubbed in more detail at the time of use, while being powder cosmetics which are liquefied and the characteristic like a milky lotion produces, and there being no feeling of jarring and being able to obtain very good using feeling and result, Excel also in the mothball nature of a product and The still more unstable ingredient under existence of water, Even when the ingredient (the following, an "unstable-under water existence ingredient", and a general term) which has an adverse effect on the physical properties of a product in the state where it dissolved in water is blended, these ingredients are blended stably and it is related with the powder cosmetics which can fully exhibit the function of this ingredient.

[0002]

[Description of the Prior Art]Conventionally, in the powder cosmetics called what is called dry water, disintegration of water or the aqueous ingredient is covered and carried out with the powder etc. which carried out hydrophobing processing, and it is made as [ liquefy / if ointment is rubbed at the time of use ]. Although face powder, whitening powder, etc. were known as these powder cosmetics, it was chalky in the result and there was a problem of being easy to dry skin.

[0003]Generally, although the method of using powder cosmetics for the purpose of grant of the pervious promotion to the skin of these drugs, moistness, and emollient nature, etc., mixing with water, an oil, liquefied cosmetics, etc. although various active principles, such as drugs, are blended was also performed, there was a problem in cosmetics in respect of usability etc. When it has an adverse effect on the physical properties of a product in instability -- this active principle decomposes and deteriorates easily under existence of water -- that combination receives various restrictions not only in the pharmaceutical form of cosmetics but in a container

gestalt, preservation conditions, handling, etc.

[0004]Various art is proposed that such a problem should be coped with. For example, to JP,6-211620,A. The powder cosmetics which aimed at stable combination of the unstable-under these water existence ingredient are indicated by carrying out specific amount combination of the hydrophobing silicic acid anhydride, the fluorine compound coating treatment cosmetics granular material, the oily component, aqueous ingredient, and unstable active principle (unstable-under water existence ingredient) which have specific surface area.

[0005]However, in the powder cosmetics of a statement, it is necessary for the above-mentioned gazette to carry out disintegration processing of this oily component with fluorine compound coating treatment cosmetics powder beforehand for oily component combination, and there is fault which becomes complicated [ a manufacturing process ]. Furthermore also in the point of usability, there is a problem that the feeling of jarring resulting from the powder characteristic of the hydrophobing silicic acid anhydride and fluorine compound coating treatment cosmetics granular material which are blended arises.

[0006]

[Problem(s) to be Solved by the Invention]In light of the above-mentioned circumstances, this invention is powder cosmetics which will be liquefied if ointment is rubbed at the time of use, though it is cosmetics of a powder form, and the characteristic face toilet or like a milky lotion produces. While being able to blend the purpose into a system, without carrying out disintegration processing of the oily component, not having a feeling of jarring and being able to obtain very good using feeling and result, It is providing the powder cosmetics liquefied by inunction which is excellent also in the mothball stability of a product, blends these ingredients stably further even when an unstable-under water existence ingredient's is blended, and can fully exhibit those functions.

[0007]

[Means for Solving the Problem]This invention relates to powder cosmetics which contain one sort or two sorts or more, and liquefy a hydrophobing silicic acid anhydride and (b) oil-in-water type emulsifying composition more than (a) surface area  $^2$ [ of 60 m ]/g by inunction.

[0008]This invention relates to powder cosmetics which contain an unstable-under (c) water existence ingredient further in the above-mentioned powder cosmetics and which are liquefied by inunction.

[0009]

[Embodiment of the Invention]Hereafter, this invention is explained in full detail. The hydrophobing silicic acid anhydride as a (a) ingredient used for this invention carries out hydrophobing processing of the particle silicic acid anhydride surface.

[0010]As the method of hydrophobing processing, if it is the method of giving water repellence

to a silicic acid anhydride, what kind of thing may be used, and the method will not be asked, but the usual surface treatment methods, such as a gaseous phase method, a liquid phase process, the autoclave method, and the mechanochemical method, can be used, for example. [0011]For example, when processing by adding a hydrophobing processing agent in the end of precursor powder, it may dilute and add to suitable solvents (dichloromethane, chloroform, hexane, ethanol, xylene, volatile silicone, etc.), or may add directly. A ball mill, the Hoca SAITO ball mill, a vibration ball mill, attritor, a pot mill, a rod mill, a pan mill, a homomixer, a HOMODI spar, a Henschel mixer, a NAUTA mixer, etc. can be used for mixed stirring of powder and a processing agent. In addition, the method (JP,1-54380,B) of using the activity on the surface of powder and polymerizing an annular ORGANO siloxane on the powder surface at low temperature 100 °C or less by gaseous phase reaction, The method (JP,1-54381,B) etc. to which the Si-H portion of surface silicone polymer is made to add pendant groups, such as glycerol monoallyl ether, can be used after said method.

[0012]Although not limited, especially as a hydrophobing processing agent Fatty acid dextrin processing powder, Trimethylsiloxy silicic acid processing powder, fluoride denaturation trimethylsiloxy silicic acid processing powder, Methylphenyl siloxy silicic acid processing powder, fluoride denaturation methylphenyl siloxy silicic acid processing powder, Hypoviscosity, such as dimethylpolysiloxane, a diphenylpolysiloxane, and a methylphenyl polysiloxane, - hyperviscous oily polysiloxane processing powder, Gum-like polysiloxane processing powder, methyl-hydrogen-polysiloxane processing powder, Fluoride denaturation methyl-hydrogen-polysiloxane processing powder, methyltrichlorosilan, Methyl trialkoxysilane, a hexamethyl disilane, a dimethyl dichloro silane, Organic silyl compounds, such as dimethyl dialkoxysilane, a trimethyl KURORU silane, and trimethyl alkoxysilane, or the processing powder by those fluoride substitution products, Ethyl trichlorosilan, ethyl trialkoxysilane, propyl trichlorosilan, propyl trialkoxysilane, hexyl trichlorosilan, hexyl trialkoxysilane, long chain alkyl trichlorosilan, Organic denaturation Silang, such as long chain alkyl triethoxysilane, or the processing powder by those fluoride substitution products, amino modifying polysiloxane processing powder, fluorine-modified-polysiloxane processing powder, alkyl-phosphoric-acid fluoridation processing powder, etc. are mentioned.

[0013]In this invention, it can prepare by covering the surface of a particle silicic acid anhydride with an organosilane system compound, a silicone compound, etc., for example. Specifically, a trimethyl siloxyl-ized silicic acid anhydride, a dimethyl siloxyl-ized silicic acid anhydride, an octyl siloxyl-ized silicic acid anhydride, a silicone oil processing silicic acid anhydride, a methylpolysiloxane processing silicic acid anhydride, etc. are illustrated.

[0014]If a hydrophobing silicic acid anhydride requires that surface area should be more than  $60\text{-m}^2/\text{g}$  at this invention and surface area is smaller than this, It becomes difficult for the particle diameter of a hydrophobing silicic acid anhydride to become large, and to be unable to

carry out orientation to the surface of the oil-in-water type emulsifying composition which is the (b) ingredient so much, but to carry out disintegration of the oil-in-water type emulsifying composition stably.

[0015](a) The maximum is 20 % of the weight preferably, and the loadings of an ingredient are 10 % of the weight especially. The minimum is 2 % of the weight preferably, and it is 5 % of the weight especially. There is a possibility that the disintegration of the oil-in-water type emulsifying composition which is the (b) ingredient cannot fully be carried out, but it may become impossible to acquire the powder form to mean when there are too few loadings, on the other hand, if there are too many loadings, can carry out disintegration of a lot of oil-in-water type emulsifying compositions, but. Even if it rubs ointment at the time of use, liquefaction becomes difficult and is not preferred on organic functions.

[0016](b) An ingredient is one sort of the oil-in-water type (O/W) emulsifying composition which emulsifies the aqueous phase (external phase) and an oil phase (internal phase), or two sorts or more. These are the ingredients for canceling a feeling of jarring and demonstrating good usability. (b) When the mold of emulsification of an ingredient is water-in-oil type (W/O) emulsification, swell to an external phase's oily component and it becomes impossible to take a powder form, since the hydrophobicity of the (a) ingredient is strong.

[0017](b) Especially if it is an aqueous ingredient which may generally be used for cosmetics, it is not limited to the aqueous phase (external phase) of an ingredient, and water, such as purified water, a water soluble polymer, etc. are preferably used for it, for example.

[0018]As a water soluble polymer, a natural water soluble polymer, the water soluble polymer of a semisynthesis, a composite water soluble polymer, an inorganic water soluble polymer, etc. are mentioned, for example.

[0019]As a natural water soluble polymer, for example Gum arabic, a tragacanth gum, Galactan, Cyamopsis Gum, locust bean gum, carob gum, karaya gum, A carrageenan, pectin, mannan, agar, quince seed (quince), ARUGE colloid (KASSOU extract) and starch (rice and corn.) Vegetable system water soluble polymers, such as a potato, wheat, and glycyrrhizic acid; Xanthan gum, Microorganism system water soluble polymers, such as hyaluronic acid, dextran, SAKUSHINO glucan, curdlan, and pullulan; animal system water soluble polymers, such as collagen, casein, albumin, and gelatin, etc. are mentioned.

[0020]As a water soluble polymer of a semisynthesis, for example Carboxymethyl starch, Starch system water soluble polymers, such as methyl hydroxypropyl starch; Methyl cellulose, A nitrocellulose, ethyl cellulose, methyl hydroxypropylcellulose, Hydroxyethyl cellulose, cellulose sodium sulfate, hydroxypropylcellulose, The cellulose type water soluble polymers in carboxymethylcellulose sodium (CMC), crystalline cellulose, the end of cellulose, etc.; alginic acid system water soluble polymers, such as sodium alginate and propylene glycol alginate, etc. are mentioned.

[0021]As a composite water soluble polymer, for example Polyvinyl alcohol, polyvinyl methyl ether, A polyvinyl pyrrolidone, A carboxyvinyl polymer. (Trade name "Carbopol") etc. -- vinyl system water soluble polymer;. polyoxyethylene system water soluble polymer [, such as a polyethylene glycol (molecular weights 20,000, 600,000, and 4,000,000), ]; -- polyoxyethylene polyoxypropylene copolymer system water soluble polymer; -- sodium polyacrylate and polyethylacrylate. Acrylic water soluble polymers, such as polyacrylamide; polyethyleneimine, cation polymer, etc. are mentioned.

[0022]As an inorganic water soluble polymer, bentonite, silicic acid AlMg (trade name "veegum"), RAPONAITO, hectorite, etc. are mentioned, for example.

[0023]A moisturizer, a chelating agent, a vegetable extract, alcohol, a pH adjuster, an antiseptic, etc. can be further blended with the aqueous phase.

[0024]A 1,3-butylene glycol, glycerin, etc. are illustrated as a moisturizer.

[0025]A metaphosphate, edetate, etc. are illustrated as a chelating agent.

[0026]A Western milfoil extract, a hamamelis extract, etc. are illustrated as a vegetable extract.

[0027](b) It is not what will be limited to the oil phase (internal phase) of an ingredient especially if it is an oily component which may generally be used for cosmetics, For example, an avocado oil, camellia oil, a turtle oil, a macadamia-nuts oil, corn oil, A mink oil, olive oil, rapeseed oil, yolk oil, sesame oil, a par chic oil, A wheat germ oil, a sasanqua oil, castor oil, the linseed oil, safflower oil, cottonseed cake oil, Perilla oil, soybean oil, peanut oil, tea seed oil, kaya oil, rice bran oil, the China Gili oil, Japanese tung oil, jojoba oil, germ oil, triglycerol, glyceryl trioctanoate, Liquid oil fat, such as tetraoctanoic acid penta Elislit and Tori Isopar RUMICHIN acid glycerin; Cacao oil, Palm oil, hardening palm oil, palm oil, palm kernel oil, Japan wax kernel oil, hydrogenated oil, Solid fats and oils, such as Japan wax and hydrogenated castor oil; Yellow bees wax, candelilla wax, A cotton low, a carnauba wax, a bayberry low, Ivo Tulloh, spermaceti wax, montan wax, Bran wax, lanolin, a kapok low, acetic acid lanolin, liquefied lanolin, Cane wax, lanolin fatty acid isopropyl, lauric acid hexyl, reduction lanolin, jojoba wax, hard lanolin, a shellac low, POE lanolin alcoholic ether, POE lanolin alcoholic acetate, POE cholesterol ether, a lanolin fatty acid polyethylene glycol, Lows, such as POE hydrogenation lanolin alcoholic ether; A liquid paraffin, Ozocerite, squalene, pristane, paraffin, a ceresin, squalane, Hydrocarbon oils, such as vaseline and microcrystallin wax; Myristic acid isopropyl, Octanoic acid Sept Iles, myristic acid octyldodecyl, pulmitic acid isopropyl, Butyl stearate, lauric acid hexyl, myristic acid Millis Chill, Oleic acid decyl, dimethyloctanoic acid hexyldecyl, lactic acid Sept Iles, Lactic acid Millis Chill, acetic acid lanolin, stearic acid isocetyl, isostearic acid isocetyl, 12-hydroxystearylacid cholesteryl, di-2-ethylhexyl acid ethylene glycol, Dipentaerythritol fatty acid ester, mono- isostearic acid N-alkyl glycol, Di-neopentylglycol dicaprata, malate diisostearyl, and glycerin 2-heptylundecanoate, tri-

2-ethylhexyl acid trimethylolpropane, Tori trimethylolpropane isostearic acid, tetra-2-ethylhexyl acid pentaerythritol, Tree 2-ethylhexyl acid glycerin, Tori trimethylolpropane isostearic acid, Cetyl-2-ethylhexanoate, 2-ethylhexyl palmitate, Trimyristin acid glycerin, tri-2-heptylundecanoic acid glyceride, Castor oil fatty acid methyl ester, oleic acid oil, the cetostearyl alcohol, Aceto glyceride, pulmitic acid 2-heptylundecyl, N-lauroyl L-glutamic acid-2-octyldodecyl ester, Ethyl laurate, myristic acid 2-hexyldecyl, pulmitic acid 2-hexyldecyl, Synthetic ester oils, such as ethyl acetate, butyl acetate, amyl acetate, and triethyl citrate; Dimethylpolysiloxane, Chain polysiloxanes, such as a methylphenyl polysiloxane and methyl hydrogen polysiloxane; although cyclic silicone, such as octamethylcyclotetrasiloxane, decamethyl cyclopentasiloxane, and a dodecamethylcyclohexane siloxane, etc. are mentioned, It is not limited to these illustration. The oily component can use one sort or two sorts or more.

[0028]To an oil phase, oily gelling agents, such as an organic modified clay mineral, starch fatty acid ester, and dimethylpolysiloxane polymer, etc. may be further used together. What [ furthermore impalpable-powder-ized high-melting point waxes, such as microcrystallin wax, as an oily component ], What encapsulated the oily component with what made high cohesiveness polymer, such as porous powder, such as magnesium carbonate, and acrylate copolymers, etc. carry out support absorption, and carried out disintegration of the oily component to them, polymethylmethacrylate, hardened gelatin, agar, etc. can also be used.

[0029]By making (ii) oil-soluble drugs, perfume, etc. which blend the oil of (i) various sorts, can adjust the usability of cosmetics and can be improved by using what encapsulated the oily component especially include in a capsule, There is an effect of \*\* that it can be stabilized till inunction use and a drugs ingredient and a perfume component can be made to maintain.

[0030]As an encapsulation ingredient, specifically Gelatin, agar, sodium alginate, Agarose, rosin, gum arabic, epoxy, polyacrylamide, a shellac, carboxymethyl cellulose, polyvinyl alcohol, polyurethane, polystyrene, polyester, polyamide, urea, etc. are illustrated as a desirable thing.

[0031]Although it can use without being limited especially if it is oil which can be blended with cosmetics as an oil component included in a capsule, The time of inunction use can make the active principle maintain stably oil-soluble drugs ingredients, such as retinol, tocopherol acetate, l-menthol, hinokitiol, ethinylestradiol, and olive oil, and by blending perfume etc. These oil components can use one sort or two sorts or more.

[0032]Encapsulation of an oil component can be manufactured, for example using publicly known methods, such as the coacervation methods (JP,1-266846,A etc.).

[0033](b) High molecular compounds other than higher alcohol and higher fatty acid, such as acrylic acid and an alkyl methacrylate copolymer, and N-stearoyl sodium L-glutamate monohydrate, may be further blended with an ingredient for much more improvement in the emulsion stability of an oil-in-water type.

[0034]As higher alcohol, cetyl alcohol, stearyl alcohol, isostearyl alcohol, 2-octyldodecanol,

behenyl alcohol, etc. are mentioned, for example.

[0035]As higher fatty acid, pulmitic acid, stearic acid, BEHEN (BEHENIN) acid, oleic acid, 12-hydroxystearic acid, isostearic acid, linolic acid, Reno Reign acid, eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), etc. are mentioned, for example.

[0036](b) The O/W emulsifying composition of an ingredient can be prepared with a conventional method, and the method in particular of emulsification is not limited. For example, although warm an oil phase and the aqueous phase at about 70 \*\*, respectively, the warmed aqueous phase is gradually added to an oil phase, it emulsifies with an emulsion machine and the method of cooling radiationally to a room temperature after that is mentioned, it is not limited to this. Especially Polymers, such as acrylic acid and an alkyl methacrylate copolymer, and N-stearoyl sodium L-glutamate monohydrate, Or the powder cosmetics which carried out disintegration of the O/W emulsifying composition emulsified and obtained using the combination of higher alcohol / high salary fatty acid of the (a) ingredient have the outstanding usability.

[0037](b) Although the loadings of an ingredient can be blended by the residue of the total loadings of the essential ingredient of the others contained in this invention cosmetics, and an arbitrary addition ingredient, In this invention, the maximum is 98 % of the weight preferably, and it is 90 % of the weight especially, and the minimum is 80 % of the weight preferably, and it is 85 % of the weight especially. When there were too few loadings and ointment is rubbed, liquefaction becomes difficult, on the other hand, if there are too many loadings, disintegration will become difficult, and it is not desirable on organic functions.

[0038]this invention powder cosmetics which contain the above (a) and the (b) ingredient as an essential ingredient make a feeling of a stain to be made into fault peculiar to powder cosmetics reduce conventionally, and the effect outstanding in the point of usability is acquired. Disintegration is good, liquefies easily at the time of inunction, and gives a fresh using feeling.

[0039]In addition to the above (a) and the (b) ingredient, in this invention, an unstable-under water existence ingredient may be further blended as a (c) ingredient.

[0040](c) In order to be blended with cosmetics, drugs, etc. as drugs etc. and to exhibit the function for example, the intervention of water is a water-soluble indispensable ingredient, but the unstable-under water existence ingredient as an ingredient. If it is unstable under existence of water to emanate decomposition, inactivation, a crystal deposit, change in color, and a nasty smell under the influence of contact with water, light, heat, etc. and it blends it with aquosity thru/or emulsified type cosmetics as it is, what produces separation, condensation, thickening, etc. will be said. As such an ingredient, drugs, such as a whitening agent, an anti-inflammatory agent, an antimicrobial agent, a hormone drug, vitamins, an enzyme, an anti-oxidant, and a vegetable extract, are mentioned, for example.

[0041]As a whitening agent, hydroquinone derivatives, such as arbutin, kojic acid, L-ascorbic acid and its derivative, pantothenyl ethyl ether, tranexamic acid, its derivative, etc. are illustrated.

[0042]Generally L-ascorbic acid is called vitamin C, and has a cellular respiration operation, an enzyme activation operation, and a collagen formation operation by the strong reducing action, and has a melanin reduction operation. As an L-ascorbic acid derivative, for example L-ascorbic acid monophosphoric ester, L-ascorbic acid monoester, such as L-ascorbic acid-2-sulfate ester, L-ascorbic acid glucosides, such as L-ascorbic acid-2-glucoside, or these salts are mentioned.

[0043]As a tranexamic acid derivative, the dimer of tranexamic acid. for example, chloride transformer 4-(transformer aminomethyl cyclohexane carbonyl) aminomethyl cyclohexane carboxylic acid. the ester body (for example, transformer 4-aminomethyl cyclohexane-carboxylic-acid 4'-hydroxyphenyl ester.) of \*\*), tranexamic acid, and hydroquinone the ester body (for example, 2-(transformer 4-aminomethyl cyclohexyl carbonyloxy)-5-hydroxybenzoic acid and its salt.) of \*\*), tranexamic acid, and gentisic acid \*\*) and the amide object (for example, transformer 4-aminomethyl methylamide cyclohexane carboxylic acid and its salt.) of tranexamic acid transformer 4-(P-methoxy benzoyl) aminomethyl cyclohexane carboxylic acid and its salt, transformer 4-guanidinomethylcyclohexane carboxylic acid, its salt, etc. -- etc. -- it is mentioned.

[0044]As an anti-inflammatory agent, glycyrrhizin acid chloride, allantoin (for example, dipotassium glycyrrhizinate, glycyrrhizic acid ammonium, etc.), etc. are mentioned, for example.

[0045]As an antimicrobial agent, resorcinol, sulfur, salicylic acid, etc. are mentioned, for example.

[0046]As a hormone drug, oxytocin, corticotropin, vasopressin, secretin, gastrin, calcitonin, etc. are mentioned, for example.

[0047]As vitamins, nicotinic acid derivatives, such as vitamin B<sub>6</sub> derivatives, such as vitamin B<sub>6</sub> and a vitamin B<sub>6</sub> hydrochloride, nicotinic acid, and nicotinamide, etc. are mentioned, for example.

[0048]As an enzyme, trypsin, lysozyme chloride, chymotrypsin, semi alkali protease, serrapeptase, lipase, hyaluronidase, etc. are mentioned, for example.

[0049]As an anti-oxidant, thiotaurine, glutathione, catechin, albumin, ferritin, metallothionein, etc. are mentioned.

[0050]As a vegetable extract, a tea extract, the Rosa roxburghii extract, a Scutellaria root extract, A Houltuynia extract, a cork tree bark extract, melilot extract, a Lamium album var. barbatum extract, Glycyrrhiza extract, a peony extract, a soapwort extract, HECHIMA EKISU, A chinae-cortex extract, a creeping saxifrage extract, the Clara extract, Nuphar japonicum



extract, a fennel extract, A primrose extract, a bara extract, JIOUEKISU, lemon extract, a lithospermi radix extract, An aloe extract, a calamus extract, a eucalyptus extract, a field horsetail extract, A sage extract, a thyme extract, a seaweed extract, a cucumber extract, a caryophylli flos extract, a bramble extract, the Melissa extract, a ginseng extract, a horse chestnut extract, a peach extract, a peach leaves extract, a mulberry extract, a cornflower extract, a hamamelis extract, glycyrrhiza extract, etc. are mentioned.

[0051](c) As for the maximum, 10 % of the weight is preferred, it is 7 % of the weight more preferably, and the loadings of an ingredient are 5 % of the weight especially. 0.001 % of the weight is preferred, and is 0.005 % of the weight more preferably, and the minimum is 0.01 % of the weight especially. If there are too few loadings, it is difficult to fully exhibit the function of an active principle slack (c) ingredient, and even if there are too many loadings more than needed, on the other hand, it will become difficult to expect the enhancement of an effect corresponding to the increase in loadings. In this invention powder cosmetics, even when the (c) ingredient is blended, stabilization of these ingredients can be attained and those functions can fully be exhibited.

[0052]Various kinds of optional components used for the usual cosmetics in addition to the above-mentioned ingredient, for example, perfume, an antiseptic, various powder, water solubility, oil-soluble drugs, etc. can be blended with the powder cosmetics of this invention in the range which does not bar the effect of this invention.

[0053]Although this invention cosmetics are powdered cosmetics, it liquefies by inunction, and they do not have a feeling of jarring, and show very good usability, are excellent also in long-term stability, and can hold an unstable-under water existence ingredient stably.

[0054]If the powder cosmetics of this invention will be in the (b) ingredient and the state where it stuck to the surroundings of the (c) ingredient further, and carry out disintegration of these (b) ingredients and the (c) ingredient by the (a) ingredient and power is applied by inunction, while the (b) ingredient and the (c) ingredient by which this adsorbed state was destroyed and disintegration was carried out ooze and liquefy, the improvement in the use feel which is the addition effect of the (b) ingredient, and the validity of the (c) ingredient are demonstrated.

[0055]If the powder cosmetics of this invention carry out disintegration of the (b) ingredient and the (c) ingredient by the (a) ingredient, the manufacturing method in particular will not be limited. For example, although the manufacturing method of adding the (a) ingredient to the (b) ingredient or the thing which dissolved the (c) ingredient here further, and mixing to it is mentioned, it is not limited to these illustration.

[0056]

[Example]Hereafter, although this invention is explained still in detail based on an example, this invention is not limited to the following examples. Weight % shows all loadings.

[0057]In advance of an example, the examining method and appraisal method which were

used by this invention are explained.

[0058][Usability (feeling of jarring) examination] The actual use examination of the panel (50 persons) judged and estimated the usability (feeling of jarring) of each example article and a comparative example article by the following standard.

(Judging standard)

higher efficacy: it does not creak -- effective : although it creaks slightly, it is a grade without a use top problem -- slightly effective : Creaking invalidity: It creaks remarkably (evaluation).

O : Higher efficacy and the test subject who did the validity and a little effective judgment are more than 80% O. : Higher efficacy, The test subject who did the validity and a little effective judgment is less than [ 50 to 80% ] \*\* : Higher efficacy and the test subject who did the validity and a little effective judgment are less than [ 30 to 50% ] x. : Higher efficacy and the test subject who did the validity and a little effective judgment are less than 30%. [0059][Drugs

(unstable-under water existence ingredient) stability test] About each example article, the ullage of the unstable-under water existence ingredient when saved at 40 \*\* (one month, three months, six months) was measured by HPLC, and the survival rate was investigated after this. [0060][Mothball stability test of a product] Each example article was evaluated by the following standard under 0 \*\*, the room temperature, and the exposing condition (sun irradiation) about the sample saved for six months at 40 \*\*.

(Evaluation)

O : O from which cosmetics did not change: \*\* in which powder or waterdrop adhered to the container a little: x which caused water-repelling a little: Water-repelling is remarkable and pharmaceutical preparation destruction took place. [0061](Example 1, the comparative example 1) Powder cosmetics were prepared by the presentation shown in the following table 1. The above-mentioned test method estimated the usability (feeling of jarring) of Example 1 and the comparative example 1. "Aerosil R812S" (the product made by Japanese Aerosil; surface area  $220\text{m}^2/\text{g}$ ) was used for trimethylsilyl group processing silicic acid anhydride (\*) among Table 1. A result is shown in Table 1.

[0062]

[Table 1]

	実施例 1	比較例 1
(1) L-アスコルビン酸-2-グルコシド	1.00	1.00
(2) 1, 3-ブチレングリコール	5.00	5.00
(3) クエン酸	0.02	0.02
(4) クエン酸ナトリウム	0.08	0.08
(5) 防腐剤	0.20	0.20
(6) 水酸化カリウム	0.02	0.02
(7) 精製水	残 余	残 余
(8) 流動パラフィン	1.00	—
(9) アクリル酸・メタクリル酸アルキル共重合体	0.05	—
(10) ベヘニルアルコール	0.08	—
(11) ステアリルアルコール	0.02	—
(12) トリメチルシリル基処理無水ケイ酸 <sup>(*)</sup>	6.00	6.00
使用性の評価 (きしみ感)	◎	×

[0063](Process) In Example 1, (1) - (7) and (9) were mixed and it dissolved (A phase). On the other hand, apart from this, (8), (10), and (11) were mixed and it dissolved (B phase). Subsequently, the emulsified matter was prepared, adding a B phase gradually to an A phase. The obtained emulsified matter and (12) were mixed and stirred, and the container was filled up.

[0064]On the other hand, (1) - (7) was mixed, it dissolved, this and (12) were mixed and stirred, and the container was filled up with the comparative example 1.

[0065]A feeling of jarring did not appear compared with the comparative example 1, but the powder cosmetics of Example 1 showed very good usability so that more clearly than the result of Table 1.

[0066](Example 2, the comparative example 2) Powder cosmetics were prepared by the presentation shown in the following table 2. The above-mentioned test method estimated the usability (feeling of jarring) of Example 2 and the comparative example 2. "Aerosil R202" (the product made by Japanese Aerosil; surface area  $100\text{m}^2/\text{g}$ ) was used for dimethyl silicone oil processing silicic acid anhydride<sup>(\*)</sup> among Table 2. A result is shown in Table 2.

[0067]

[Table 2]

	実施例 2	比較例 2
(1) トラネキサム酸	0.50	0.50
(2) 1, 3 - ブチレングリコール	5.00	5.00
(3) クエン酸	0.02	0.02
(4) クエン酸ナトリウム	0.08	0.08
(5) 防腐剤	0.20	0.20
(6) 水酸化カリウム	0.02	0.02
(7) 精製水	残 余	残 余
(8) スクワラン	0.24	—
(9) メチルポリシロキサン	0.24	—
(10) 2 - エチルヘキサン酸セチル	0.33	—
(11) ベヘニン酸	0.07	—
(12) ステアリン酸	0.06	—
(13) ベヘニルアルコール	0.15	—
(14) ステアリルアルコール	0.03	—
(15) ジメチルシリコンオイル処理無水ケイ酸 <sup>(*)</sup>	7.00	7.00
使用性の評価 (きしみ感)	◎	×

[0068](Process) In Example 2, (1) - (7) was mixed and it dissolved (A phase). On the other hand, apart from this, (8) - (14) was mixed and it dissolved (B phase). Subsequently, the emulsified matter was prepared, adding a B phase gradually to an A phase. The obtained emulsified matter and (15) were mixed and stirred, and the container was filled up.

[0069]On the other hand, (1) - (7) was mixed, it dissolved, this and (15) were mixed and stirred, and the container was filled up with the comparative example 2.

[0070]A feeling of jarring did not appear compared with the comparative example 2, but the powder cosmetics of Example 2 showed very good usability so that more clearly than the result of Table 2.

[0071](Example 3, the comparative example 3) Powder cosmetics were prepared by the presentation shown in the following table 3. The above-mentioned test method estimated the usability (feeling of jarring) of Example 3 and the comparative example 3. "Aerosil

RY200S" (the product made by Japanese Aerosil; surface area 80m<sup>2</sup>/g) was used for dimethyl silicone oil processing silicic acid anhydride<sup>(\*)</sup> among Table 3. A result is shown in Table 3.

[0072]

[Table 3]

	実施例 3	比較例 3
(1) パントテニールエチルエーテル	0.10	0.10
(2) 1, 3-ブチレングリコール	5.00	5.00
(3) クエン酸	0.02	0.02
(4) クエン酸ナトリウム	0.08	0.08
(5) 防腐剤	0.20	0.20
(6) 精製水	残 余	残 余
(7) メチルポリシロキサン	1.00	—
(8) N-ステアロイル-L-グルタミン酸ナトリウム	0.10	—
(9) ベヘニルアルコール	0.15	—
(10) ステアリルアルコール	0.08	—
(11) ジメチルシリコンオイル処理無水ケイ酸 <sup>(*)</sup>	7.00	7.00
使用性の評価 (きしみ感)	◎	×

[0073](Process) In Example 3, (1) - (6) and (8) were mixed and it dissolved (A phase). On the other hand, apart from this, (7), (9), and (10) were mixed and it dissolved (B phase). Subsequently, the emulsified matter was prepared, adding a B phase gradually to an A phase. The obtained emulsified matter and (11) were mixed and stirred, and the container was filled up.

[0074]On the other hand, (1) - (6) was mixed, it dissolved, this and (11) were mixed and stirred, and the container was filled up with the comparative example 3.

[0075]A feeling of jarring did not appear compared with the comparative example 3, but the powder cosmetics of Example 3 showed very good usability so that more clearly than the result of Table 3.

[0076]<Stability of drugs (unstable-under water existence ingredient)> The stability of the unstable-under water existence ingredient was evaluated by the above-mentioned drugs (unstable-under water existence ingredient) stability test method about this invention powder cosmetics prepared in Examples 1-3. A result is shown in Table 4.

[0077]

[Table 4]

	製剤中の水存在下不安定成分の残存率 (重量%)		
	1 ヶ月	3 ヶ月	6 ヶ月
実施例 1	100	98	98
実施例 2	100	99	99
実施例 3	100	99	98

[0078]Also in any of the powder cosmetics of Examples 1-3, at 40 \*\*, the unstable active

principle almost remains and after six-month progress is satisfactory in drugs stability with the passage of time so that clearly from Table 4.

[0079]<Mothball stability of a product> The mothball stability of the product was evaluated by the above-mentioned mothball stability test method about this invention powder cosmetics prepared in Examples 1-3. A result is shown in Table 5.

[0080]

[Table 5]

	実施例 1	実施例 2	実施例 3
0℃保存	○	○	○
室温保存	◎	◎	◎
露光条件下	○	○	○
40℃保存	○	○	○

[0081]Also in any of the powder cosmetics of Examples 1-3, it is satisfactory [ after six month progress ] in product preservation stability with the passage of time not almost changeful [ the gestalt of pharmaceutical preparation ] under each preservation conditions so that clearly from Table 5.

[0082]

(Example 4)

(A part for \*\* \*\* \*) (% of the weight)

(1) xanthan gum 0.3 (2) 1,3-butylene glycol 4.0 (3) citrate 0.05 (4) sodium acid citrate 0.05 (5) antiseptics 0.2 (6) potassium hydrates 0.02 (7) purified water . \*\* Complementary (8) L-ascorbic-acid-2-glucoside . 1.0 (9) acrylic acid and alkyl methacrylate copolymer The 0.06 (10) liquid-paraffin 1.0 (11) behenyl alcohol 0.05 (12) stearyl alcohol 0.03 (13) cellulose-type water soluble polymer 1.0 ("SERURO flow C25": made by Chisso Corp.)

(14) dimethyl silicone oil processing silicic acid anhydride 2.0 ("Aerosil R202" surface area 100m<sup>2</sup>/g)

(Process) (1) (13) was distributed, after mixing - (9) and dissolving (A phase). On the other hand, apart from this, (10) - (12) was mixed and it dissolved (B phase). Subsequently, the emulsified matter was prepared, adding a B phase gradually to an A phase. The obtained emulsified matter and (14) were mixed and stirred, and the container was filled up.

[0083]The powder cosmetics of Example 4 do not have a feeling of jarring, and show very good usability, and are excellent in drugs stability and the mothball stability of a product.

[0084]

(Example 5)

(A part for \*\* \*\* \*) (% of the weight)

(1) hydroxyethyl cellulose 0.2 (2) trehaloses 2.0 (3) citrate 0.05 (4) sodium acid citrate 0.05 (5)

antiseptics 0.2 (6) potassium hydrates 0.02 (7) purified water The emainder . (8) L-ascorbic acid-2-glucoside . 1.0 (9) N-stearoyl sodium L-glutamate monohydrate 0.2 (10) methylpolysiloxanes 1.0 (11) behenyl alcohol 0.1 (12) stearyl alcohol 0.05 (13) silicic acid anhydrides 2.0 ("sill DEKKUSU L-51"; made by Asahi Glass Co., Ltd.) (14) Dimethyl silicone oil processing silicic acid anhydride 20.0 ("Aerosil RY200S" and surface area 80m<sup>2</sup>/g)

(Process) (1) - (9) was mixed and it dissolved (A phase). On the other hand, apart from this, (10) - (12) was mixed and it dissolved (B phase). Subsequently, the emulsified matter was prepared, adding a B phase gradually to an A phase. The obtained emulsified matter, (13), and (14) were mixed and stirred, and the container was filled up.

[0085]The powder cosmetics of Example 5 do not have a feeling of jarring, and show very good usability, and are excellent in drugs stability and the mothball stability of a product.

[0086]Good disintegration is obtained, and each powder cosmetics of the above-mentioned Examples 1-5 of the liquefaction at the time of inunction are also good, and have fresh usability.

[0087](Example 6, the comparative example 4) Powder cosmetics were prepared by the presentation shown in the following table 7. The above-mentioned test method estimated the usability (feeling of jarring) of Example 6 and the comparative example 4, and the mothball stability of the product. Capsule dispersion-liquid (A phase) <sup>(\*)</sup> is dispersion liquid of the encapsulation oily component of the presentation shown in the following table 6 among Table 7. "Aerosil R202" (the product made by Japanese Aerosil; surface area 100m<sup>2</sup>/g) was used for dimethyl silicone oil processing silicic acid anhydride <sup>(\*)</sup> among Table 7. A result is shown in Table 7.

[0088]

[Table 6]

カプセル分散液 (A相) (重量%)	
イオン交換水	残 余
1, 3-ブチレングリコール	20.0
ホホバ油	2.0
香料	適 量
硬化ゼラチン	0.1
防腐剤	適 量

[0089](Process) By the coacervation method, the capsule dispersion liquid (A phase) which dissolved perfume in jojoba oil were obtained.

[0090]

[Table 7]

		実施例 6	比較例 4
(1) カプセル分散液 (A相) <sup>(*)</sup>		10.00	10.00
(2) イオン交換水		残 余	残 余
(3) 1, 3-ブチレングリコール		10.00	10.00
(4) L-アスコルビン酸-2-グルコシド		1.00	1.00
(5) 防腐剤		0.20	0.20
(6) クエン酸		0.02	0.02
(7) クエン酸ナトリウム		0.08	0.08
(8) 水酸化カリウム		0.02	0.02
(9) 流動パラフィン		1.00	—
(10) アクリル酸・メタクリル酸アルキル共重合体		0.05	—
(11) ベヘニルアルコール		0.08	—
(12) ステアリルアルコール		0.02	—
(13) ジメチルシリコンオイル処理無水ケイ酸 <sup>(**)</sup>		4.00	4.00
使用性の評価 (きしみ感)		◎	×
製品の長期保存安定性試験	0℃保存	○	○
	室温保存	◎	◎
	露光条件下	○	○
	40℃保存	○	○

[0091](Process) In Example 6, after mixing (2) - (8) and (10) and dissolving, uniform dispersion of the A phase ((1)) was carried out (B phase). Apart from this, (9), (11), and (12) were mixed and it dissolved (C phase). Subsequently, the emulsified matter was prepared, adding C phase gradually to a B phase. The obtained emulsified matter and (13) were mixed and stirred, and the container was filled up.

[0092]On the other hand, in the comparative example 4, after mixing (2) - (8) and dissolving, uniform dispersion of the A phase ((1)) was carried out (B phase). This and (13) were mixed and stirred and the container was filled up.

[0093]As compared with the comparative example 4, a feeling of jarring does not appear, but the powder cosmetics of Example 6 have freshness, and showed good usability so that more clearly than the result of Table 7. In the powder cosmetics of Example 6, under each preservation conditions, the gestalt of pharmaceutical preparation hardly changes but after six-month progress is satisfactory also in pharmaceutical preparation stability with the passage of time.

[0094]

[Effect of the Invention]Though it is [ the powder cosmetics of this invention ] powder, while



liquefying by inunction at the time of use and making coolness and giving admiration gently, excelling in the compatibility to skin moreover, and giving emollient nature, moisture, etc. in use Naka, Very good using feeling and result of a feeling of jarring which are not can be obtained. It excels also in the mothball stability of a product. Since it can continue at a long period of time and can hold stably while composing the unstable-under water existence ingredient made conventionally difficult [ combination for cosmetics ], it can use widely as cosmetics new type.

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[Translation done.]